From dead spruce to bluejoint—out of the frying pan and into the fire?

by Doug Newbould

Calamagrostis canadensis, also known as bluejoint reedgrass, Canadian reedgrass or just bluejoint, is one of the most common and widespread tall grass species in North America. It can be found from Labrador to Alaska and south to the mountains of North Carolina, New Mexico and California. It grows very well at sea level in the North and Northwest, and it can be found at elevations over 12,000 feet in the mountains of New Mexico. Whatever you might call it and wherever it's found, it can mean big trouble to homeowners and firefighters when wildfires occur.

I don't have a lot of data to support this, but I feel pretty confident in saying that most destructive wildfires on the Kenai Peninsula get started and/or spread in bluejoint. I can say this with some certainty because I know grasses and other "flashy" or light fuels carry the majority of wildfires in North America. In fact, almost all forest or big timber fires start on the ground in light surface fuels, before working their way up into the forest canopy. And one of the well-known, "common denominators of fire behavior on tragedy fires" is a flare-up that occurs in deceptively light fuels.

When it comes to light or flashy fuels, *Calamagrostis* is one of the "big hitters." It's the Mark McGuire of the grass fuel types in North America. It can reach heights of six feet or more. It forms root mats and thickets so dense that trees and other plants cannot get established. It reproduces both vegetatively (through its roots) and through seed production. It can cover large tracts of land for relatively long periods of time—Kodiak Island, for example. It responds rapidly to changes in relative humidity, and it can carry fire almost any time of the year (if it's not covered by snow). It can produce flame lengths of ten to twenty feet, and more if down dead woody fuels are present. Fire can travel through it at over three miles per hour with a little wind, and that is an extremely fast rate of spread among forest fuel types.

Here on the Kenai Peninsula, *Calamagrostis* is often associated with open stands of Lutz or white spruce. It grows equally well in the valley bottoms and on the side slopes of the Kenai Mountains. It really seems to thrive in the lowlands and coastal areas of the western peninsula. And it is spreading! Many of the areas that were, until recently, covered by mature stands of Lutz spruce, are now grasslands with lots of dead wood. Of course these areas are also where many Peninsula residents choose to live.

I know that many of you have been doing your best to reduce or eliminate the dead spruce hazard fuels from around your homes. And I am proud of the effort we fire managers have made to spread the word about defensible space and fire prevention. But I am not very confident that all Peninsula residents understand the dangers of wildfire in tall grass fuels. I am concerned that after all of our efforts to mitigate the impacts of the spruce bark beetle, there will be a letdown of sorts. And some folks might lose their hard-earned caution concerning wildfire ignitions in the wildland-urban interface.

For these past several years, as the beetles spread their influence across the Peninsula, we have been focusing on dead trees—and rightly so. We need to continue the work of tree removal in the interface, where public safety is at highest risk. But I believe now is the time to add another component to that focus—reducing the risk of wildfire in *Calamagrostis* fuel types.

How can we stop the encroaching grasslands? Well, there are ways. One of the best ways is to plant other species before bluejoint invades. Hardwood (deciduous) trees and bushes are a good choice. Other grasses, Forbes and wildflowers can also work well. Talk to your local nursery for planting ideas. Some people choose to burn their dead grasses every year in the spring to remove the threat and encourage new growth. This can be effective, but it can also be the start of a wildfire. I know some folks who have experienced this, and they did not enjoy it. Another way is to mow it or cut it back periodically, to keep it from forming tussocks and building up a fuel bed. I am not sure about the effectiveness of herbicides on bluejoint, and I would not recommend chemical treatments anyway—due to their detrimental effects in the ecosystem.

I don't want you to think I dislike bluejoint or think I believe it's some evil force—marching across the landscape. No, I believe *Calamagrostis canadensis* is one of nature's finest examples of a ubiquitous and efficient species, much like the spruce bark beetle. I think we just have to find a way to coexist with it, without burning down the house!

Doug Newbould is a fire management officer at the Kenai National Wildlife Refuge. For more information about the refuge, stop by headquarters at the top of Ski Hill Road in Soldotna, call (907) 262-7021.